Application No. 10/007,175   Customer No. 01933
Response to Final Office Action

Listing of Claims:

1.   (Currently Amended) An image pick-up method for picking
up an image of an object with a camera mounted via a pan head on
a moving pedestal and for operating together a real object image
of the object taken with the camera and another image, said
5 method comprising:

setting a reference position on a floor surface on which the
moving pedestal moves and a reference angle of the moving
pedestal;

detecting a moving amount of the moving pedestal from said
10 reference position and a rotation angle of the moving pedestal
from said reference angle;

finding a position and an angle of the camera with respect
to the object based on said reference position, said reference
angle, said moving amount and said rotation angle; and

15 transmitting data of the position and the angle of the
camera with respect to the object to a computer for operating
together the real object image of the object taken with the
camera and said another image based on the position and the angle
of the camera with respect to the object_;

20 wherein said moving amount of the moving pedestal is
obtained by measuring a length of a portion of a wheel of the

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moving pedestal, which has been brought into contact with the
floor surface.

Claim 2 (Canceled).

3.   (Original) The method according to claim 1, wherein the
moving pedestal includes at least three wheels, and said rotation
angle is calculated from moving distances of two wheels which are
distant in terms of a moving direction.

4.   (Currently Amended) The method according to claim 3,
wherein said two wheels are most distant along a direction
perpendicular to the moving direction of the wheels of the moving
pedestal.

5.   (Previously Presented) The method according to claim 1,
wherein a first line and a second line are provided on the floor
surface to perpendicularly intersect at said reference position,
        wherein two first sensors for detecting the first line and
one second sensor for detecting the second line are provided on
the moving pedestal, and
        wherein said reference position and said reference angle are
found based on a position of each of the two first sensors at a
time when the two first sensors each pass said first line, and a

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10   position of the second sensor at a time when said second sensor

passes the second line.

        6.   (Currently Amended) An image pick-up system for picking

up a real object image of an object to be operated together with

another image, said system comprising:

        a camera unit comprising a camera for picking up an image of

5   an object mounted on a moving pedestal via a pan head;

        calculating means for calculating a positional relationship

between the camera and the object;

        setting means for setting a reference position on a floor

surface on which the moving pedestal moves and a reference angle

10   of the moving pedestal and for inputting the reference position

and the reference angle to said calculating means; and

        detection means for detecting a moving amount of the moving

pedestal from the reference position, and a rotation angle of the

moving pedestal from the reference angle;

15   wherein said calculating means calculates a position and an

angle of the camera with respect to the object based on the

reference position, the reference angle, the moving amount and

the rotation angle of the moving pedestal, and the calculating

means transmits data of the position and the angle of the camera

20   with respect to the object to a computer for operating together

the real object image of the object taken with the camera and

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said another image based on the position and the angle of the

camera with respect to the object; and

    wherein said detection means detects the moving amount of

25 the moving pedestal by measuring a length of a portion of a wheel

of the moving pedestal, which has been brought into contact with

the floor surface.

    7. (Previously Presented) The system according to claim 6,

wherein said setting means includes a reference detection

mechanism for detecting the reference position and the reference

angle.

    Claim 8 (Canceled).

    9. (Previously Presented) The system according to claim 6,

wherein the moving pedestal comprises at least three wheels and

said detection means includes at least three encoders each for

detecting a moving distance of a respective one of the wheels.

    10. (Previously Presented) The system according to claim 9,

wherein the rotation angle is calculated from the moving distance

detected by the encoders corresponding to two of the wheels,

which are distant with respect to the moving direction.

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11.   (Currently Amended) The system according to claim 10, wherein said two wheels are most distant along <u>a direction perpendicular to</u> the moving direction of the wheels of the moving pedestal.

12.   (Previously Presented) The system according to claim 9, wherein the moving pedestal further comprises a roller in contact with each of the wheels to be rotated together with the wheel, and

5   wherein the moving distance of each of the wheels is detected based on the number of rotations of the respective roller and a pulse number counted by the respective encoder.

13.   (Currently Amended) An image pick-up system for picking up a real object image of an object to be operated together with another image, <u>said system</u> comprising:

a moving pedestal including three wheels;

5   a camera unit comprising a camera for picking up the real object image of the object, which is mounted via a pan head on said moving pedestal;

calculating means for calculating a positional relationship between the camera and the object;

10   three encoders provided respectively corresponding to said three wheels of said moving pedestal;

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a plurality of sensors provided on said moving pedestal for detecting a predetermined mark on a floor surface on which said moving pedestal moves; ~~and~~

15   setting means for setting a reference position on the floor surface and a reference angle of said moving pedestal, which are determined based on detection values of said plurality of sensors and pulse numbers counted by said encoders during movement of said moving pedestal, and for inputting the reference position

20   and the reference angle to said operation means; <u>and</u>

detection means for detecting, based on the pulse numbers counted by said encoders, a moving amount of the moving pedestal from the reference position, and a rotation angle of the moving pedestal from the reference angle;

25   wherein said ~~operation~~ <u>calculating</u> means calculates a position and an angle of the camera with respect to the object based on the reference position, the reference angle, ~~a~~ <u>the</u> moving amount from the reference position and ~~a~~ <u>the</u> rotation angle from the reference angle, which are obtained based on the

30   pulse numbers counted by said encoders, and transmits data of the position and the angle of the camera with respect to the object to a computer for operating together the real object image of the object taken with the camera and said another image based on the position and the angle of the camera with respect to the object<u>;</u>

35   <u>and</u>

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wherein said detection means detects the moving amount of the moving pedestal by measuring a length of a portion of a wheel of the moving pedestal, which has been brought into contact with the floor surface.

14.   (New) The system according to claim 13, wherein the moving pedestal further comprises a roller in contact with each of the wheels to be rotated together with the wheel, and

wherein the moving distance of each of the wheels is detected based on the number of rotations of the respective roller and a pulse number counted by the respective encoder.

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